OFFICE OF TECHNOLOGY
Network Services

Excel 2000 Fundamentals Training Manual

Microsoft Excel 2000 Fundamentals

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EXCEL 2000 FUNDAMENTALS

Training Objective

The objective of this tutorial is to give you the fundamentals of Microsoft Excel 2000. After completing this tutorial, you would be able to create and format a simple workbook.

This training tutorial is designed for those with no prior Excel 2000 experience. In an effort to help make your training experience more informative, this manual includes step-by-step instructions, along with screenshots to show what you should see when an instruction is carried out.

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What is Microsoft Excel 2000?

Microsoft Excel is an electronic spreadsheet program. You might have heard the terms "spreadsheet" and "worksheet". People generally use them interchangeably. To remain consistent with Microsoft and other publishers the term **worksheet** refers to the row-and-column matrix sheet on which you work upon and the term **spreadsheet** refers to this type of computer application. In addition, the term **workbook** will refer to the book of pages that is the standard Excel document. The workbook can contain worksheets, chart sheets, or macro modules.

Workbook

In Microsoft Excel, a workbook is the file in which you work and store your data. Because each workbook can contain many worksheets, you can organize various kinds of related information in a single file.

Worksheet

The primary part of Excel is the Worksheet. A worksheet consists of cells organized into columns and rows. A worksheet is always stored in a workbook.
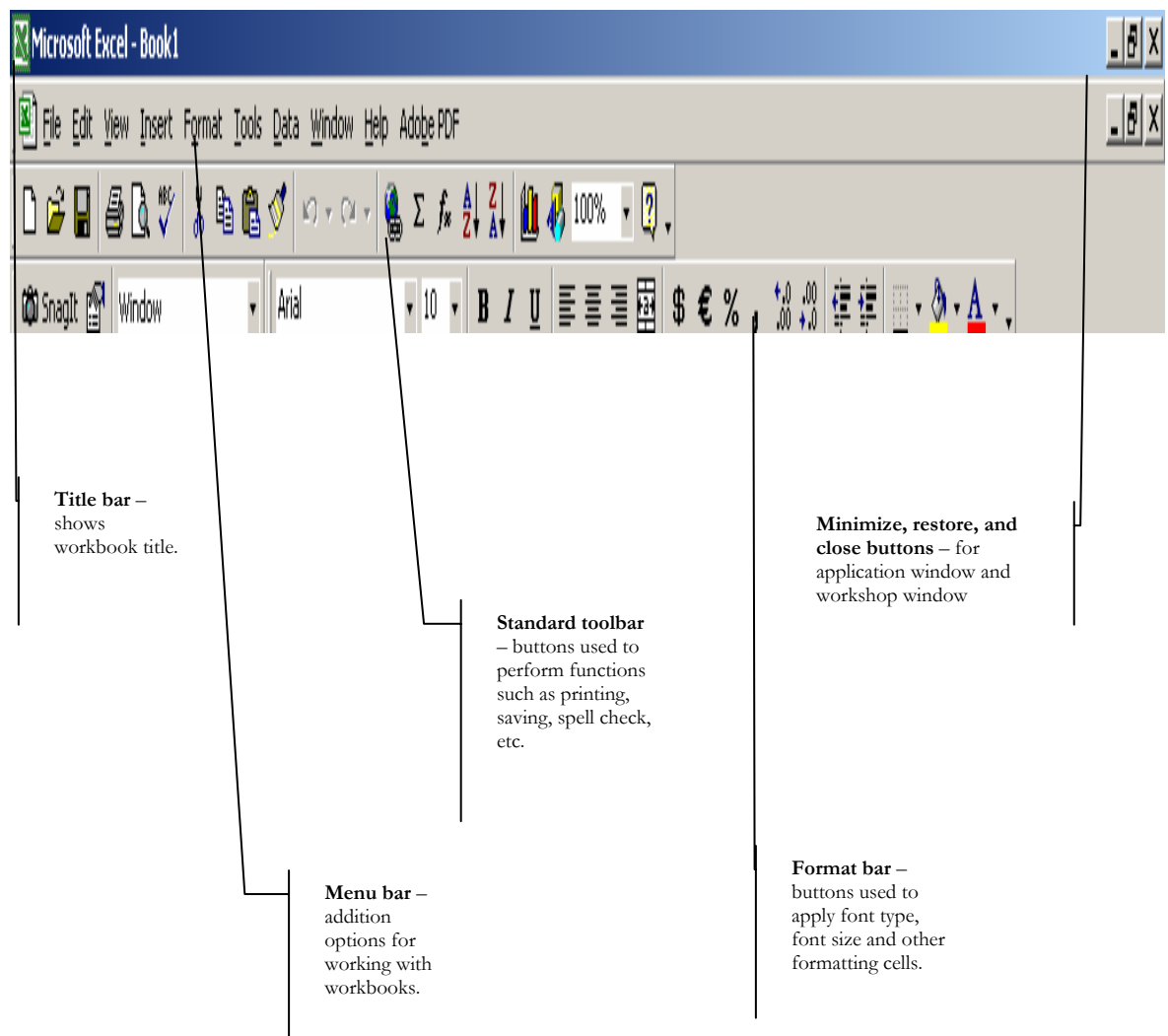
Now that you know the difference between a workbook, worksheet and spreadsheet, let's get started to that you can see how they each work.

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Exploring a Workbook Window

Before you start creating workbooks, you need to become familiar with workbook window.

1. Start Excel 2000 by clicking **Start | Programs | Microsoft Office 2000 | Microsoft Excel**. *(This may vary depending on your computer's configuration).*

2. The application window and workbook window appear.

3. Let's explore.

Title bar – shows workbook title.

Standard toolbar – buttons used to perform functions such as printing, saving, spell check, etc.

Menu bar – addition options for working with workbooks.

Minimize, restore, and close buttons – for application window and workshop window

Format bar – buttons used to apply font type, font size and other formatting cells.

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The **Cell** is an intersection of each row and column. The example shows **Cell Reference** (combination of column letter and row number) A1.

Formula Bar displays the cell's text and formulas.

The Excel worksheet contains **256 columns** that extend across the worksheet, lettered A through Z, AA through AZ, BA through BZ, and continuing to IA through IV.

The Excel worksheet contains 65,536 **Rows** that extend down the worksheet.

The names of the Worksheets appear on tabs at the bottom of the Workbook window. To move from sheet to sheet, click the sheet tabs. Sheet 1 is the active Worksheet in the above screen shot. To rename the sheet, Right-click and select Rename.

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Working in the Workbook

When started, Excel displays a new workbook. In a new workbook, all the cells are empty. A highlighted border indicates an active cell. As you type, the text is stored in the active cell.

In this section you will learn how to type and edit cell reference data.

1.   Click in cell **A1**.

2.   Type, "**August**".

3.   Notice the text appears in the formula bar.

4.   Press **<enter>**.

Click on the Excel window, select a cell by clicking on it, and enter the desired text.

Observe that your text displays in two areas. Text displays in the active cell within the workbook and in the **formula bar** also. The formula bar activates as soon as you begin typing in a cell. At the far left is the **reference section**, which will show the reference of the active cell.
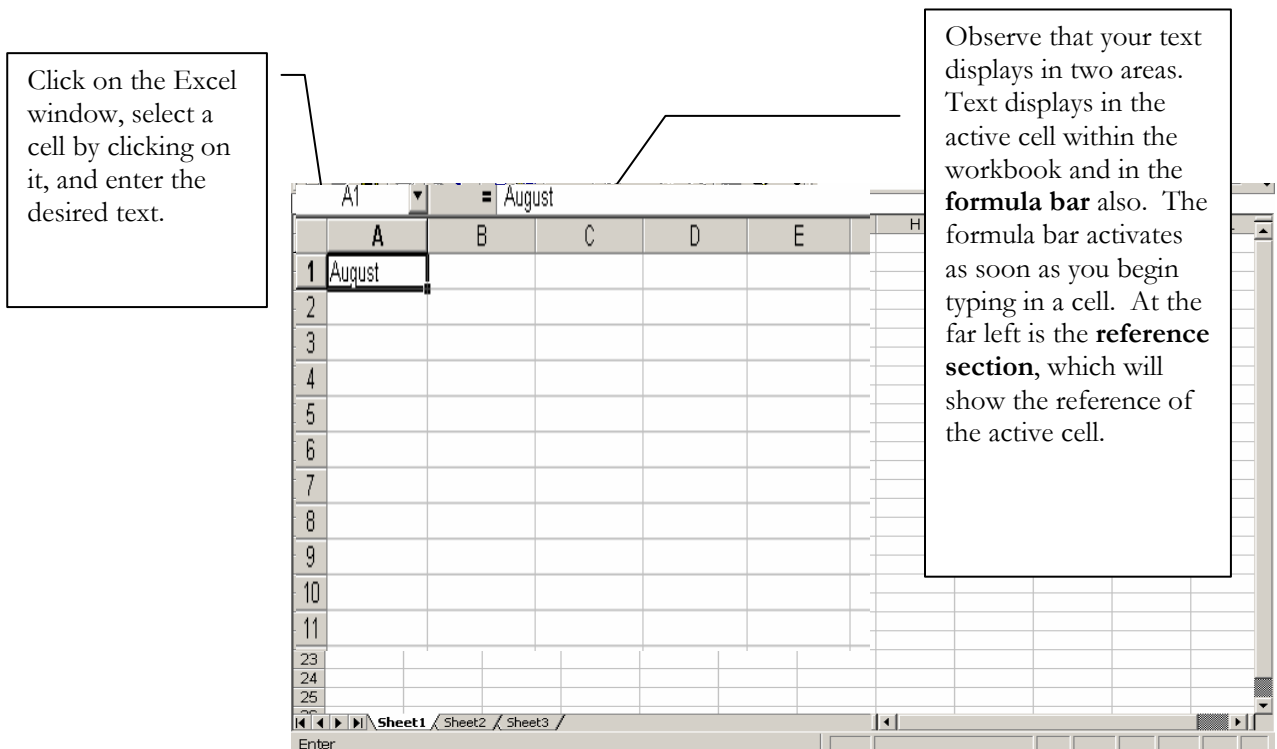
5. Continue filling in the worksheet as shown in the table.

Cell Reference	Enter this text
A1	August
A2	September
A3	October
A4	November
A5	December
A6	January
A7	February
A8	March
A9	April
A10	May
B1	125
B2	50
B3	87
B4	20
B5	54
B6	90
B7	200
B8	30
B9	300
B10	50

6. The workbook should look like the following.

	A	B
1	August	125
2	September	50
3	October	87
4	November	20
5	December	54
6	January	90
7	February	200
8	March	30
9	April	300
10	May	50

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Saving a Workbook

When you save a workbook for the first time, you assign a file name and indicate where you want to store the file on your computer's hard disk or in another location. Each time you subsequently save the workbook, Microsoft Excel updates the workbook file with your latest changes.

1.   Go to **File|Save**

2.   Go to f**:\[username]**

3.   In the file name textbox, type **Bus Accidents**.

4.   Click **Save** button.

5.   The file extension "**.xls**" is automatically placed on the file name.
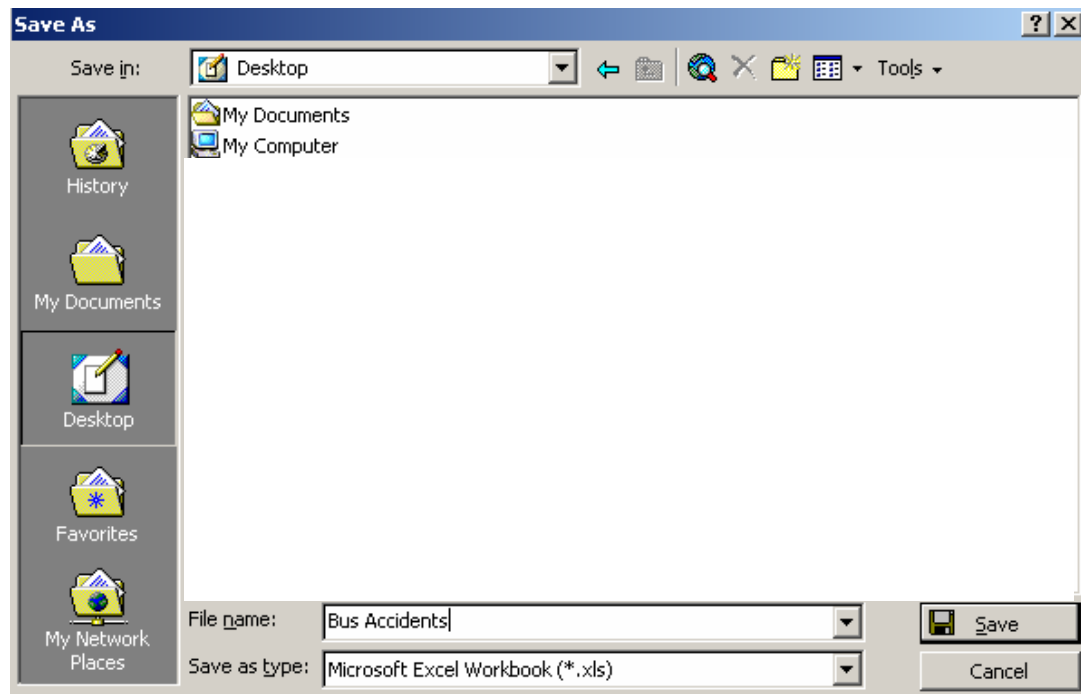
Printing a Workbook

Let's print a hard copy of your workbook.

1. Type your name in Cell **D1**.

2. **Save** the workbook.

3. Go to **File|Print.** *If you have multiple printers, select the appropriate printer from the Name box.*

4. Click **Ok** button.
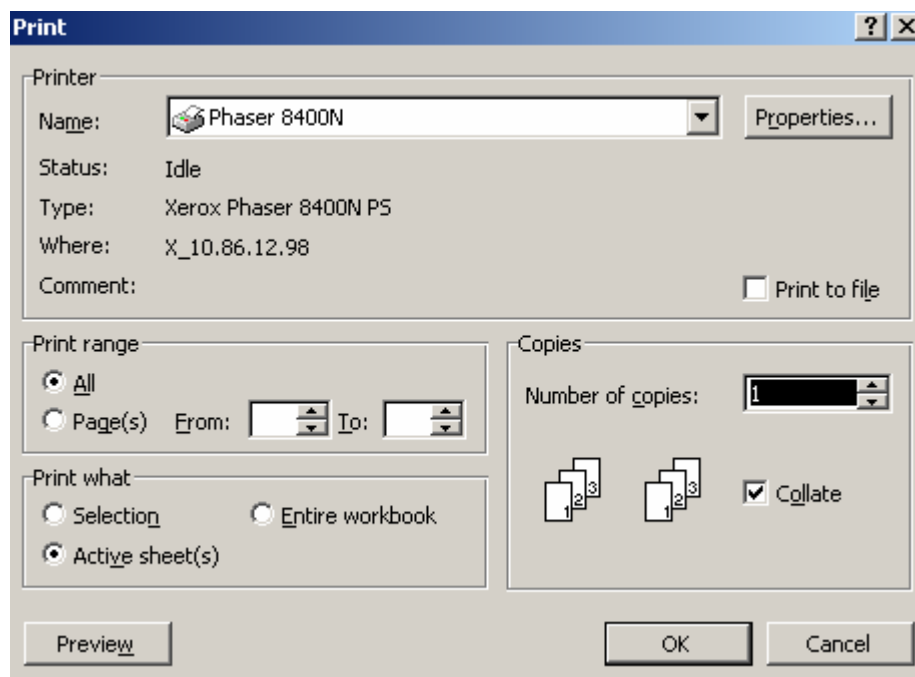
5. Close application window.

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Review Exercise One

In this exercise you will practice what you learned in the precious section. Don't forget to use the standard toolbar buttons.

1.   Start **Excel**.

2.   Enter the text as shown below.

Cell Reference	Enter this text
A1	Your Name Bus Routes
A3	Bus Number
B3	Location
C3	Number of Children
A5	27
B5	Duplex Lane
C5	15
A6	123
B6	Tree Top Road
C6	20
A7	600
B7	Rosebud Street
C7	40
A8	80
B8	Hilton Drive
C8	35
A9	900
B9	Maddison Lane
C9	17

3.   **Save As** f:\[username]**Your Name Bus Routes.xls**.

4.   **Print** the workbook.

5.   **Close** application window**.**

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Keys for moving and scrolling in a worksheet or workbook

Keystroke	Move Action
Arrow keys	Move one cell up, down, left, or right
Ctrl +arrow key	Move to the edge of the current data region
HOME	Move to the beginning of the row
CTRL+HOME	Move to the beginning of the worksheet
CTRL+END	Move to the last cell on the worksheet, which is the cell at the intersection of the rightmost used column and the bottom-most used row (in the lower-right corner), or the cell opposite the home cell, which is typically A1
PAGE DOWN	Move down one screen
PAGE UP	Move up one screen
ALT+PAGE DOWN	Move one screen to the right
ALT+PAGE UP	Move one screen to the left
CTRL+PAGE DOWN	Move to the next sheet in the workbook
CTRL+PAGE UP	Move to the previous sheet in the workbook
CTRL+F6 or CTRL+TAB	Move to the next workbook or window
CTRL+SHIFT+F6 or CTRL+SHIFT+TAB	Move to the previous workbook or window
F6	Move to the next pane in a workbook that has been split
SHIFT+F6	Move to the previous pane in a workbook that has been split
CTRL+BACKSPACE	Scroll to display the active cell
F5	Display the **Go To** dialog box
SHIFT+F5	Display the **Find** dialog box
SHIFT+F4	Repeat the last **Find** action (same as **Find Next**)
TAB	Move between unlocked cells on a protected worksheet

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Select text, cells, ranges, rows, and columns

Selection	Technique
Text in a cell	If editing in a cell is turned on, select the cell, double-click in it, and then select the text in the cell. If editing in a cell is turned off, select the cell, and then select the text in the formula bar.
A single cell	Click the cell, or press the arrow keys to move to the cell.
A range of cells	Click the first cell of the range, and then drag to the last cell.
All cells on a worksheet	Click the **Select All** button.
Nonadjacent cells or cell ranges	Select the first cell or range of cells, and then hold down CTRL and select the other cells or ranges.
A large range of cells	Click the first cell in the range, and then hold down SHIFT and click the last cell in the range. You can scroll to make the last cell visible.
An entire row	Click the row heading.
An entire column	Click the column heading.
Adjacent rows or columns	Drag across the row or column headings. Or select the first row or column; then hold down SHIFT and select the last row or column.
Nonadjacent rows or columns	Select the first row or column, and then hold down CTRL and select the other rows or columns.
More or fewer cells than the active selection	Hold down SHIFT and click the last cell you want to include in the new selection. The rectangular range between the active cell and the cell you click becomes the new selection.

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Creating Formulas

A formula is an equation that performs operations on worksheet data. Formulas can perform mathematical operations, such as addition and multiplication, or they can compare worksheet values or join text. A formula always begins with an equal sign (=).

In this section we will create a formula to calculate the total number school bus accidents.

1.   Start **Excel**

2.   Go to **File|Open**.

3.   f:\[username]**2004-2005 Bus Accidents.xls**

4.   Click **OK** button.

5.   Using the Σ **AutoSum** button, you will create a formula to get the total number of accidents by date.

6.   Highlight cell references **B4** through **L4**.

7.   On the standard toolbar, press Σ .

8.   The result is placed in cell reference **L4**.

9.   **Save** your changes.

10.   Now that you have a working formula for totaling the number of accidents by date, you will copy it to total the remaining dates.

11.   Click cell references **L4** through **L34.**

12.   To quickly fill in the active cell with the contents of the cell above it, press **Ctrl + D**.

13.   **Save** your changes.

14. Enter data for the month of May. Notice the totals changing.

	A	B	C	D	E	F	G	H	I		K	L
1	School Year 2004 -2005 School Bus Aciden											
2	Date of	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	A⁻	May	per of dents)ate
3	Accident											
4	1	0	100	50	50	100	0	50	100	⊃	0	550
5	2	2	4	0	6	8	0	10	10	⊃	2	42
6	3	50	50	0	50	40	0	60	50	⊃	50	350
7	4	71	0	98	64	66	0	98	9	⊃	71	477
8	5	65	0	74	23	99	0	0	0	⊃	65	326
9	6	99	73	12	0	85	0	0	0	⊃	99	368
10	7	0	2	53	0	54	456	53	30	⊃	0	648
11	8	0	95	62	10	12	62	62	0	⊃	0	303
12	9	158	34	0	20	3	10	49	96	⊃	34	404
13	10	87	79	0	0	47	78	845	53	⊃	79	1268
14	11	45	0	96	589	8	9	96	12	5	0	900
15	12	63	0	120	42	95	0	0	125	३	0	508
16	13	10	20	433	0	0	0	0	351	⊃	20	844
17	14	0	30	22	0	0	0	22	78	5	0	597
18	15	0	69	56	74	0	236	56	64	₺	0	629
19	16	56	74	0	32	0	95	98	60	⊃	40	455
20	17	73	14	0	95	0	74	74	10	⊃	66	406
21	18	33	0	71	86	0	20	71	30	⊑	99	496
22	19	300	0	26	31	0	0	0	0	1	85	473
23	20	98	20	23	0	0	0	0	0	⊇	54	247
24	21	0	100	95	0	0	4	95	4	∃	0	1087
25	22	0	36	62	0	0	89	62	36	⊇	0	317
26	23	45	44	0	0	0	52	10	44	⊃	120	315
27	24	756	22	0	0	0	41	30	22	⊃	433	1304
28	25	96	0	65	0	0	79	65	13	1	22	391
29	26	41	0	98	0	0	0	0	95	३	56	313
30	27	23	75	98	0	0	0	0	0	₣	0	223
31	28	0	61	75	0	0	28	75	61	∃	0	329
32	29	0	13	12	0	0	59	0	13	∃	0	135
33	30	75	97	0	72	0	53	0	97	⊃	0	394
34	31	14	98	0	233	0	46	0	98	३	0	722

15. Let's continue working with the **AutoSum** feature.

16. We will get the total number of accidents by month.

17. Get the totals for August. Click in cell reference **B35**.

18.   Click **Σ** .

Date of Accident	Aug	Sep	ec	Jan	Feb	Mar	Apr	May	Number of Accidents by Date
1	0	100	100	0	50	100	100	0	550
2	2	4	8	0	10	10	0	2	42
3	50	50	40	0	60	50	0	50	350
4	71	0	66	0	98	9	0	71	477
5	65	0	99	0	0	0	0	65	326
6	99	73	85	0	0	0	0	99	368
7	0	2	54	456	53	30	0	0	648
8	0	95	12	62	62	0	0	0	303
9	158	34	3	10	49	96	0	34	404
10	87	79	47	78	845	53	0	79	1268
11	45	0	8	9	96	12	45	0	900
12	63	0	95	0	0	125	63	0	508
13	10	20	0	0	0	351	10	20	844
14	0	30	0	0	22	78	445	0	597
15	0	69	0	236	56	64	74	0	629
16	56	74	0	95	98	60	0	40	455
17	73	14	0	74	74	10	0	66	406
18	33	0	0	20	71	30	86	99	496
19	300	0	0	0	0	0	31	85	473
20	98	20	0	0	0	0	52	54	247
21	0	100	0	4	95	4	789	0	1087
22	0	36	0	89	62	36	32	0	317
23	45	44	0	52	10	44	0	120	315
24	756	22	0	41	30	22	0	433	1304
25	96	0	0	79	65	13	51	22	391
26	41	0	0	0	0	95	23	56	313
27	23	75	0	0	0	0	27	0	223
28	0	61	0	28	75	61	29	0	329
29	0	13	0	59	0	13	38	0	135
30	75	97	0	53	0	97	0	0	394
31	14	98	0	46	0	98	233	0	722
Number of Accidents by Month	=SUM(B4:B34)								

19.   The cells above the cell reference B35 are selected.

20.   Notice the formula =**sum(B4:B34).**

21.   Press <**Enter**>.

22.	The result is placed in the active cell reference **B35**.

23.	Check the results.

24.	Save your changes.

Date of Accident	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Number of Accidents by Date
1	0	100	50	50	100	0	50	100	100	0	550
2	2	4	0	6	8	0	10	10	0	2	42
3	50	50	0	50	40	0	60	50	0	50	350
4	71	0	98	64	66	0	98	9	0	71	477
5	65	0	74	23	99	0	0	0	0	65	326
6	99	73	12	0	85	0	0	0	0	99	368
7	0	2	53	0	54	456	53	30	0	0	648
8	0	95	62	10	12	62	62	0	0	0	303
9	158	34	0	20	3	10	49	96	0	34	404
10	87	79	0	0	47	78	845	53	0	79	1268
11	45	0	96	589	8	9	96	12	45	0	900
12	63	0	120	42	95	0	0	125	63	0	508
13	10	20	433	0	0	0	0	351	10	20	844
14	0	30	22	0	0	0	22	78	445	0	597
15	0	69	56	74	0	236	56	64	74	0	629
16	56	74	0	32	0	95	98	60	0	40	455
17	73	14	0	95	0	74	74	10	0	66	406
18	33	0	71	86	0	20	71	30	86	99	496
19	300	0	26	31	0	0	0	0	31	85	473
20	98	20	23	0	0	0	0	0	52	54	247
21	0	100	95	0	0	4	95	4	789	0	1087
22	0	36	62	0	0	89	62	36	32	0	317
23	45	44	0	0	0	52	10	44	0	120	315
24	756	22	0	0	0	41	30	22	0	433	1304
25	96	0	65	0	0	79	65	13	51	22	391
26	41	0	98	0	0	0	0	95	23	56	313
27	23	75	98	0	0	0	0	0	27	0	223
28	0	61	75	0	0	28	75	61	29	0	329
29	0	13	12	0	0	59	0	13	38	0	135
30	75	97	0	72	0	53	0	97	0	0	394
31	14	98	0	233	0	46	0	98	233	0	722
Number of Accidents by Month	2260										

25. Now that you have a working formula for getting the monthly accident totals, you can copy that formula to the remaining months.

26. Highlight cell references **B35** through **K35**.

27. Press <**Ctrl> + <R**.>

28. Check the results.

29. **Save** your changes.

30. Calculate the accidents for the school year.

31. Click cell reference **B36**.

32. Click Σ .

33. The cell reference above B35 is selected.

34. Highlight the remaining cells.

35. Press and hold <**Shift**> key.

36. Click cell reference **K35**.

37. Press <**Enter**>.

38. Check the results.

39. **Save** your changes.

40. The finished workbook should look like the following screenshot.

Date of Accident	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Number of Accident
1	0	100	50	50	100	0	50	100	100	0	550
2	2	4	0	6	8	0	10	10	0	2	42
3	50	50	0	50	40	0	60	50	0	50	350
4	71	0	98	64	66	0	98	9	0	71	477
5	65	0	74	23	99	0	0	0	0	65	326
6	99	73	12	0	85	0	0	0	0	99	368
7	0	2	53	0	54	456	53	30	0	0	648
8	0	95	62	10	12	62	62	0	0	0	303
9	158	34	0	20	3	10	49	96	0	34	404
10	87	79	0	0	47	78	845	53	0	79	1268
11	45	0	96	589	8	9	96	12	45	0	900
12	63	0	120	42	95	0	0	125	63	0	508
13	10	20	433	0	0	0	0	351	10	20	844
14	0	30	22	0	0	0	22	78	445	0	597
15	0	69	56	74	0	236	56	64	74	0	629
16	56	74	0	32	0	95	98	60	0	40	455
17	73	14	0	95	0	74	74	10	0	66	406
18	33	0	71	86	0	20	71	30	86	99	496
19	300	0	26	31	0	0	0	0	31	85	473
20	98	20	23	0	0	0	0	0	52	54	247
21	0	100	95	0	0	4	95	4	789	0	1087
22	0	36	62	0	0	89	62	36	32	0	317
23	45	44	0	0	0	52	10	44	0	120	315
24	756	22	0	0	0	41	30	22	0	433	1304
25	96	0	65	0	0	79	65	13	51	22	391
26	41	0	98	0	0	0	0	95	23	56	313
27	23	75	98	0	0	0	0	0	27	0	223
28	0	61	75	0	0	28	75	61	29	0	329
29	0	13	12	0	0	59	0	13	38	0	135
30	75	97	0	72	0	53	0	97	0	0	394
31	14	98	0	233	0	46	0	98	233	0	722
Number of Accidents by Month	2260	1210	1701	1477	617	1491	1981	1561	2128	1395	
Number of Accidents for the Year	15821										

School Year 2004 -2005 School Bus Accidents

41. Close Excel.

EXCEL 2000 FUNDAMENTALS

Review Exercise Two

In this exercise you will practice what you learned in the previous section. You will create a simple formula to calculate the number of buses and number of children riding the school buses.

1.   Start Excel.

2.   Open the workbook named **f:\[username]\Total Count.xls**.

3.   Click cell referenced **B9**.

4.   Type the formula **=COUNT(B3:B7).**

5.   Press **<Enter>**.

6.   Click cell reference **B11**.

7.   Type the formula **=SUM(D3:D7).**

8.   Press **<Enter>**.
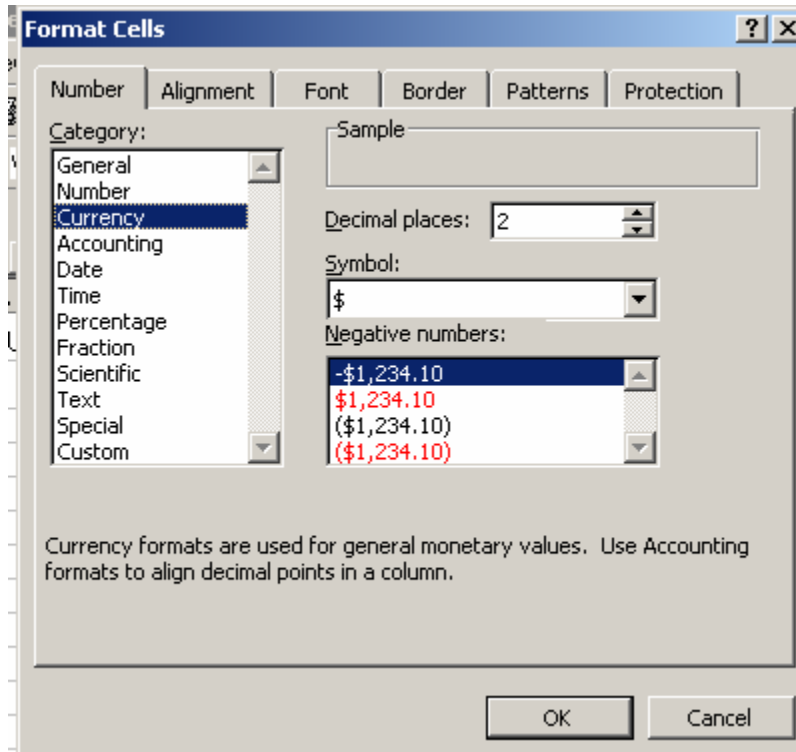
9.   **Save** your changes.

	A	B	C	D
1		Bus Number	Bus Route	Number of Children
2				
3		27	Duplex Lane	30
4		123	Tree Top Road	20
5		600	Rosebud Street	40
6		80	Hilton Drive	35
7		900	Maddison Lane	17
8				
9	Number of Buses	5		
10				
11	Total Number of Children	142		
12				

Apply Formatting Cells

In this section you will apply formatting to cells, such as bold, underline, shading, etc.

1.   Open the workbook **f:\\[username]\\Buses R Us.xls**.

2.   Highlight cell references **D5 through D9**.

3.   Go to **Format|Cells**.

4.   Click **Number** tab.

5.   Select **Currency**.

6.   Click **OK**.

7.   The cost to transport each child is **$20**.

8.   Use the **=SUM** function to create a formula that calculates the total cost by bus.

9.   Go to cell **D5**.

10.   Type **=sum(C5 * 20).**

11. Press **<Enter>**.

12. Check the result.

13. Save your changes.

14. Copy this formula to the remaining cells.

15. Click cell reference **B16**.

16. Use the =Sum function to calculate the total cost transport the children.

17. Apply the **Currency** format to the cell.

18. Refer to steps 3 through 6.

19. At this point, it's all about personal preference.

20. Have fun!

	A	B	C	D	E
1		Buses R Us			
2					
3	**Bus Number**	**Route Location**	**Number of Children**	**Cost Per Bus to Transport Children**	
4					
5	27	Duplex Lane	30	$600.00	
6	123	Tree Top Road	20	$400.00	
7	600	Rosebud Street	40	$800.00	
8	80	Hilton Drive	35	$700.00	
9	900	Maddison Lane	17	$340.00	
10					
11					
12	*Total Buses*	5			
13					
14	*Total Children*	142			
15					
16	*Cost to Transport Children*	$2,840.00			
17					
18					

EXCEL 2000 FUNDAMENTALS

Review Exercise Three

In this exercise you will practice everything you learned in this tutorial.

1.   Start **Excel**.

2.   Create the following workbook.

3.   Save **f:\[username]\Yearly Maintenance Report.xls**.

	A	B	C	D	E	F
1		Pack n Go Mass Transportation				
2						
3		Yearly Maintenance Report				
4						
5	Item	2002	2003	2004	Item Totals	
6	Brakes	$2,300.00	$4,300.00	$6,400.00	$13,000.00	
7	Compressor	$44,000.00	$5,000.00	$10,000.00	$59,000.00	
8	Oil Changes	$3,000.00	$12,000.00	$25,000.00	$40,000.00	
9	Tire Rotation	$1,000.00	$200.00	$4,000.00	$5,200.00	
10	Transmission	$46,000.00	$59,000.00	$100,000.00	$205,000.00	
11						
12	Year Totals	$96,300.00	$80,500.00	$145,400.00	$322,200.00	
13						
14						
15						
16						
17						
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26						
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28						
29						

2002-2004 / Sheet2 / Sheet3 /